

CLAIMS

1. A fuel cell apparatus for use with a host device having a processor and a processor link, the fuel cell apparatus comprising:

- 5 a fuel reservoir;
 an information storage device; and
 an information storage device link, operably connected to the information storage device, configured to operably connect the information storage device to the processor link.

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2. A fuel cell apparatus as claimed in claim 1, further comprising:
 a bi-product reservoir.

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3. A fuel cell apparatus as claimed in claim 1, further comprising:
 a fluid connector configured to releasably connect the fuel reservoir to a fluid connector in the host device.

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4. A fuel cell apparatus as claimed in claim 1, further comprising:
 a housing enclosing the fuel reservoir; and
 at least one fuel cell, located at least partially within the housing, connected to the fuel reservoir.

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5. A fuel cell apparatus as claimed in claim 4, wherein the at least one fuel cell comprises a fuel cell stack.

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6. A fuel cell apparatus as claimed in claim 4, wherein the at least one fuel cell comprises a PEM fuel cell.

7. A fuel cell apparatus as claimed in claim 4, further comprising:
 a power contact, operably connected to the at least one fuel cell, configured to electrically connect the fuel cell to the host device.

8. A fuel cell apparatus as claimed in claim 1, wherein the information storage device link comprises an electrical connector.

9. A fuel cell apparatus as claimed in claim 1, wherein the information storage device link comprises a non-contact link.

10. A fuel cell apparatus as claimed in claim 1, wherein the information storage device comprises non-volatile memory.

10 11. A fuel cell apparatus as claimed in claim 1, wherein the information storage device defines a data structure and stores data indicative of the data structure.

12. A fuel cell apparatus as claimed in claim 1, wherein the information storage device stores data that is used by the host device to determine whether the fuel cell apparatus is acceptable for use with the host device.

15 13. A fuel cell apparatus as claimed in claim 1, wherein the information storage device stores data that represents at least one of an initial fuel level, a current fuel level, and a low fuel warning threshold.

20 14. A fuel cell apparatus as claimed in claim 1, wherein the information storage device stores data that represents current fuel level in a decrementable data field.

15 15. A fuel cell apparatus as claimed in claim 1, wherein the information storage device stores data that represents non-operative information.

16. A fuel cell apparatus as claimed in claim 1, wherein the information storage device stores data that will trigger a predetermined host device function.

30 17. A fuel cell apparatus as claimed in claim 16, wherein host device includes a display and the predetermined host function comprises a displaying a message on the display corresponding to data stored in the information storage device.

18. A replaceable fuel cartridge for use with a host device including a processor, a processor link and a power generation device, the fuel cartridge comprising:

5 a cartridge housing;

 a fuel reservoir within the cartridge housing;

10 a connector that connects the fuel reservoir to the power generation device when the fuel cartridge is received by the host device;

 an information storage device carried by the housing; and

 an information storage device link, operably connected to the information

15 storage device and carried by the housing, configured to operably connect the information storage device to the processor link when the fuel cartridge is received by the host device.

19. A replaceable fuel cartridge as claimed in claim 18, further comprising:

 a bi-product reservoir within the cartridge housing;

15 a connector that connects the bi-product reservoir to the power generation device when the fuel cartridge is received by the host device.

20. A replaceable fuel cartridge as claimed in claim 18, wherein the information storage device link comprises an electrical connector.

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21. A replaceable fuel cartridge as claimed in claim 18, wherein the information storage device link comprises a non-contact link.

25 22. A replaceable fuel cartridge as claimed in claim 18, wherein the information storage device comprises non-volatile memory.

23. A replaceable fuel cartridge as claimed in claim 18, wherein the information storage device defines a data structure and stores data indicative of the data structure.

30 24. A replaceable fuel cartridge as claimed in claim 18, wherein the information storage device stores data that is used by the host device to determine whether the fuel cartridge is acceptable for use with the host device.

25. A replaceable fuel cartridge as claimed in claim 18, wherein the information storage device stores data that represents at least one of an initial fuel level, a current fuel level, and a low fuel warning threshold.

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26. A replaceable fuel cartridge as claimed in claim 18, wherein the information storage device stores data that represents current fuel level in a decrementable data field.

10 27. A replaceable fuel cartridge as claimed in claim 18, wherein the information storage device stores data that represents non-operative information.

28. A replaceable fuel cartridge as claimed in claim 18, wherein the information storage device stores data that will trigger a predetermined host device function.

15 29. A replaceable fuel cartridge as claimed in claim 28, wherein host device includes a display and the predetermined host function comprises a displaying a message on the display corresponding to data stored in the information storage device.

20 30. A replaceable fuel cell device for use with a host device having a processor, a processor link and at least one host power contact, the fuel cell device comprising:

a fuel reservoir;

at least one fuel cell operably connected to the reservoir;

at least one fuel cell power contact configured to be operably connected to the at least one host power contact when the fuel cell device is received by the host device;

25 an information storage device; and

an information storage device link, operably connected to the information storage device, configured to operably connect the information storage device to the processor link when the fuel cell device is received by the host device.

30 31. A fuel cell device as claimed in claim 30, further comprising:
a bi-product reservoir operably connected to the at least one fuel cell.

32. A fuel cell device as claimed in claim 30, wherein the at least one fuel cell comprises a fuel cell stack.

33. A fuel cell device as claimed in claim 30, wherein the at least one fuel cell
5 comprises a PEM fuel cell.

34. A fuel cell device as claimed in claim 30, wherein the information storage device link comprises an electrical connector.

10 35. A fuel cell device as claimed in claim 30, wherein the information storage device link comprises a non-contact link.

36. A fuel cell device as claimed in claim 30, wherein the information storage device comprises non-volatile memory.

15 37. A fuel cell device as claimed in claim 30, wherein the information storage device defines a data structure and stores data indicative of the data structure.

20 38. A fuel cell device as claimed in claim 30, wherein the information storage device stores data that is used by the host device to determine whether the fuel cell device is acceptable for use with the host device.

25 39. A fuel cell device as claimed in claim 30, wherein the information storage device stores data that represents at least one of an initial fuel level, a current fuel level, and a low fuel warning threshold.

40. A fuel cell device as claimed in claim 30, wherein the information storage device stores data that represents current fuel level in a decrementable data field.

30 41. A fuel cell device as claimed in claim 30, wherein the information storage device stores data that represents non-operative information.

42. A fuel cell device as claimed in claim 30, wherein the information storage device stores data that will trigger a predetermined host device function.

43. A fuel cell device as claimed in claim 42, wherein host device includes a
5 display and the predetermined host function comprises a displaying a message on the display corresponding to data stored in the information storage device.